



UNITED STATES PATENT AND TRADEMARK OFFICE

UNITED STATES DEPARTMENT OF COMMERCE
United States Patent and Trademark Office
Address: COMMISSIONER FOR PATENTS
P.O. Box 1450
Alexandria, Virginia 22313-1450
www.uspto.gov

APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/643,759	08/18/2003	Michael K. Barnoski	1125/206	3922
26588	7590	07/03/2007		
LIU & LIU 444 S. FLOWER STREET SUITE 1750 LOS ANGELES, CA 90071			EXAMINER NASRI, JAVAID H	
			ART UNIT 2839	PAPER NUMBER
			MAIL DATE 07/03/2007	DELIVERY MODE PAPER

Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/643,759

Applicant(s)

BARNOSKI ET AL.

Examiner

Javaid Nasri

Art Unit

2839

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 23 April 2007.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 96-104 and 106-145 is/are pending in the application.
- 4a) Of the above claim(s) 99-102, 114, 117-129 and 135 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 96-98, 103, 104, 106-113, 115, 116, 130-134 and 136-145 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 18 August 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application |
| Paper No(s)/Mail Date <u>11/2/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. The newly added limitation in each of the claims 96, 136, 139, 140, 142 and 143 in the amendment received on 4/23/2007 is not shown in the elected figures 22 and 23. Therefore, the limitation in each of the above claims is not considered.

Claim Rejections - 35 USC § 103

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

3. Claims 96-98, 104, 106-113, 115, 116, 130-132, 134, 136-141 and 143-145 are rejected under 35 U.S.C. 103(a) as being unpatentable over Grabbe (6,695,488) in view of Lessar et al (5,902,326, cited in previous office action).

Grabbe discloses, **for claim 96**, an optical fiber, a ferrule (10) supporting one end of the optical fiber, said ferrule having a body comprising a first female half (12) and a second ferrule (14) made of metal (see claim 7) defining at least a bore for supporting an optical fiber; and a sleeve (32) sized and shaped to receive the ferrule and to couple to the connection device, so as to align the ferrule and the optical fiber supported by the ferrule relative to the connection device, **for claim 97**, the body of the ferrule has a cross-section that is generally uniform for an entire length of the body, **for claim 98**, the body of the ferrule has a cross-section that is generally rectangular,

Art Unit: 2839

for claim 104, the first ferrule half and the second ferrule half are initially brought together and maintained in a mating relationship by the sleeve, **for claim 106**, the first ferrule half has a structure that is substantially similar to that of the second ferrule half, each provided with at least a groove, which together define the bore for supporting the optical fiber, **for claims 107-111**, the first ferrule half and the second ferrule half support the optical fiber with the end of the optical fiber flush against an end face of the ferrule, **for claims 115**, matching grooves, **for claim 116**, first ferrule half and the second ferrule half are connected at an edge, **for claim 130**, the first ferrule half and the second ferrule half each has a hollow body structure facing each other, **for claim 131**, the sleeve is made of metal, **for claim 132**, the sleeve has a cross- section that is characterized by a loop, **for claim 134**, the sleeve has a cross- section that is generally uniform, **for claim 136**, a first ferrule (10) having a metal body (see claim 7) supporting the first optical fiber, wherein the metal body of the first ferrule is characterized by a structure comprising a first ferrule half (12) and a second ferrule half (14); a second ferrule (complimentary mating component, not shown, see col. 1, lines 35-38) having a metal body supporting the second optical fiber; a common sleeve (32) sized and shaped to receive the first ferrule and the second ferrule, so as to align the first ferrule relative to the second ferrule, and the first optical fiber relative to the second optical fiber, **for claim 137**, at least one of the first and second ferrules comprises third and fourth half ferrules that together define a bore sized and shaped to receive respective one of the first and second optical fibers, **for claim 138**, the common sleeve has a first end receiving the first ferrule, and a second end receiving the second ferrule, **for claim 139**, a first component (10) configured to support a first optical fiber, comprising a first body defining a first bore for supporting the first optical fiber, wherein the first body is characterized by a first

Art Unit: 2839

structure comprising a first ferrule half (12) and a second ferrule half (14); a second component (complimentary mating component, not shown, see col. 1, lines 35-38) configured to support a second optical fiber, comprising a second body defining a second bore for supporting the second optical fiber, wherein the second body is characterized by a second structure; and a third component (32) configured to axially align the first component and the second component, so that the first optical fiber is aligned with the second optical fiber, wherein the third component is characterized by a third structure, **for claim 140**, a first ferrule half (12) and a second ferrule half (14) to form a ferrule (10) defining at least a bore for supporting an optical fiber; and forming a sleeve (32) sized and shaped to slidably receive the ferrule and to couple to the connection device, to align the ferrule and the optical fiber that is supported by the ferrule relative to the connection device, **for claim 141**, the sleeve is made of metal, **for claim 143**, a ferrule (10) having a body defining at least a bore for supporting an optical fiber, the body characterized by a metal structure (see claim 7) comprising a first ferrule half (12) and a second ferrule half (14); an optical fiber supported by the body; and a sleeve (32) coupled to the ferrule, and sized and shaped to connect to the connection device, so as to align the ferrule and the optical fiber supported by the body relative to the connection device, **for claim 144**, a first component (10) comprising a first body defining at least a bore supporting a first optical fiber, wherein the first body is characterized by a metal structure (see claim 7) comprising a first ferrule half (12) and a second ferrule half (14); and a second component (complimentary mating component, not shown, see col. 1, lines 35-38) comprising a second body supporting a second optical fiber, wherein the first body and the second body are axially aligned end-to-end, so that the first optical

Art Unit: 2839

fiber is axially aligned with the second optical fiber, **for claim 145**, the first component further comprising a third body (32) sized and shaped to receive the second body.

However, Grabbe does not disclose,

- a) The body (ferrule) is formed by a stamping process. Lessar et al discloses ferrule is formed by a stamping process (see claim 22), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Grabbe to have the ferrule being formed by a stamping process in view of Lessar et al for economical purpose.
- b) For claims 112 and 113, the two ends are attached by welding or adhesive. Official notice is taken that to attach two ends by welding or adhesive is well known in the art, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Grabbe to have two ends attached by welding or adhesive to have permanent attachment.

Claim Rejections - 35 USC § 102

4. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

5. Claim 142 is rejected under 35 U.S.C. 102(e) as being anticipated by Grabbe.

Art Unit: 2839

for claim 142, a ferrule (10) having a body made of metal (see claim 7), wherein the body comprises a first ferrule half (12) and second ferrule half (14) defining a bore for supporting an optical fiber; and a sleeve (32) sized and shaped to receive the ferrule and to couple to the connection device, so as to align the ferrule and the optical fiber supported by the ferrule relative to the connection device,

6. Claim 133 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grabbe in view of Lessar et al as applied to claims 96, 131 and 132 above, and further in view of Gilliland et al (6,283,644).

Grabbe in view of Lessar et al discloses all the limitations of claims 96, 131 and 132, as shown above,

However, Grabbe in view of Lessar et al does not disclose:

- a) For claim 133, a sleeve with a split along an axial direction. Gilliland et al discloses a sleeve with a split along an axial direction, therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Grabbe in view of Lessar et al to have a sleeve with a split along an axial direction in view of Gilliland et al for better fit.

7. Claim 103 is rejected under 35 U.S.C. 103(a) as being unpatentable over Grabbe in view of Lessar et al as applied to claim 96 above, and further in view of Karlovich (5,037,328, cited in previous office action)

Grabbe in view of Lessar et al discloses all the limitations of claim 96, as shown above,

However, Grabbe in view of Lessar et al does not disclose:

Art Unit: 2839

- a) For claim 103, the ferrule includes at least one of a groove and a protrusion on its external surface and the sleeve includes at least one of a complementary protrusion or groove. Karlovich discloses the ferrule includes at least one of a groove and a protrusion on its external surface and the sleeve includes at least one of a complementary protrusion or groove (see marked figure 1, attached), therefore, it would have been obvious to one of ordinary skill in the art, at the time of the invention for Grabbe in view of Lessar et al to have the ferrule includes at least one of a groove and a protrusion on its external surface and the sleeve includes at least one of a complementary protrusion or groove in view of Karlovich for better fit.

Response to Arguments

- 8. Applicant's arguments filed on 4/23/2007 have been fully considered but they are not persuasive.

Applicant's comment regarding:

- a) There is no motivation in combining Grabbe and Lessar. It should be noted that there is a motivation because both the references deals with optical devices and ferrule. It should also be noted that the process of stamping is well known in the art.
- b) The sleeve 32 in Grabbe is not a sleeve that is structured to align fibers held by two ferrules, but is used only to fasten two ferrule halves. It should

be noted that to held or fasten two ferrule halves is also a sort of alignment. If they are not fastened they will misalign (see note below).

Note: USPTO interprets claims, giving claims their "broadest reasonable interpretation." (See, e.g., *In re Morris*, 127 F.3d 1048, 1054-55 (Fed. Cir. 1997)).

Contact

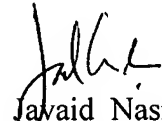
9. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Javaid Nasri whose telephone number is 571 272 2095. The examiner can normally be reached on Monday to Friday.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Tulsidas C. Patel can be reached on 571 272 2800 ext 39. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

Art Unit: 2839

If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.


Javaid Nasri
Primary Examiner
Art Unit 2839

JN

Jhn
June 27, 2007

